Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers	)	CC Docket No. 01-338
	)	
Implementation of the Local Competition Provisions of the Telecommunications Act of 1996	)	CC Docket No. 96-98
	)	
Deployment of Wireline Services Offering Advanced Telecommunications Capability	)	CC Docket No. 98-147

REPLY COMMENTS OF AT&T CORP.

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July 17, 2002

EXECUTIVE SUMMARY

AT&T's comments demonstrated that the Commission's unbundling rules will be current and faithful to the Telecommunications Act of 1996 insofar as – and only insofar as – they give competitors unrestricted access to all levels of ILEC loops (including NGDLC loops) and transport, to loop/transport combinations, and to switching obtained as part of the UNE-Platform ("UNE-P") to provide service to all customer locations that are served by voice-grade loops. Because the Commission's current rules have allowed CLECs to obtain UNE-P to serve residential customers in States that have set reasonable UNE rates, these rules have begun to generate significant residential competition that is creating great consumer benefits and that otherwise would not exist.

At the same time, although limited facilities-based competition has developed for large business customers that require substantial amounts of service, AT&T demonstrated that the current restrictions on access to NGDLC loops, to existing loop/transport combinations, and to unbundled switching for certain customer locations – and the absence of the electronic loop provisioning similar to that which allowed long distance competition – are preventing broader development of switch-based competition. Notably, this form of facilities-based competition is the most feasible because of the huge natural monopoly characteristics of the ILECs' loops and transport facilities. It is also the most meaningful because loops and transport (as opposed to switches) do not permit CLECs to offer customers significant service differentiation. Accordingly AT&T, together with all of the State commissions that filed comments, urged the Commission to retain the existing list of UNEs and eliminate or significantly modify the three existing restrictions on their availability. Further, AT&T urged that the Commission not sanction the de-listing of unbundled switching (and UNE-P) for customers served by voice-grade

loops until ILECs provide electronic loop provisioning for the affected customers and a market for competitive switching develops.

Since the opening comments were filed, two major judicial decisions have been issued that bear directly on the issues in this proceeding. In *Verizon Telephone Cos. v. FCC,* 122 S. Ct. 1646 (2002), the Supreme Court held that broad unbundling is not just permitted, but is required, by the objectives of the 1996 Act. It held that ending incumbents' monopolies and creating local competition is an "end in itself" under the Act and that the Act is designed to "jump-start" local competition by "reorganiz[ing]" the incumbents' monopolies to "make them vulnerable to interlopers" and by giving "aspiring competitors every possible incentive to enter local retail telephone markets, short of confiscating the incumbents' property." *Id.* at 1654, 1661. The Court recognized that ILECs "have almost an insurmountable competitive advantage" over new entrants and that the Act is intended to allow "hundreds" of new entrants to access elements that are "costly to duplicate" even if there are some "large competitive carriers" with the "resources" to replicate the elements economically. *Id.* at 1662, 1672 & n. 27.

But only days later, in *USTA v. FCC,* 290 F.3d 415 (D.C. Cir. 2002), the D.C. Circuit remanded the Commission's 1999 *UNE Remand Order* and vacated and remanded its *Line Sharing Order.* Critically, *USTA* did *not* pass on the validity of the Commission's decision to order the unbundling of any specific elements, and the Court did not direct the Commission to exclude any particular elements from the unbundling requirements on remand. But the Court held, relying on *Verizon*, that there were narrow deficiencies in the Commission's prior orders, and gaps in its evidence and explanation, that had to be remedied on remand. In particular, the Court held that the *UNE Remand Order* had adopted an impairment standard that was overbroad in that it permitted determinations to rest on cost disparities that were "universal" between new

entrants and incumbents in all markets, rather than those "linked (*in some degree*) to natural monopoly" characteristics. *USTA*, 290 F.3d at 427. It also concluded that, in adopting national unbundling rules, the Commission had not explained why it did not address potential "market specific variations in competitive impairment" that result from the historic practice of promoting universal service through the use of implicit subsidies. *Id.* at 422. The Court also stated that the Commission had not sufficiently responded to the incumbents' claims that substantial overbreadth in unbundling rules is not "costless," but would lead to reduced investment by both CLECs and ILECs. *Id.* at 422-23. Finally, the Court held that the Commission's *Line Sharing Order* had improperly failed to address claims that the "intermodal" competition provided by cable and satellite internet access services was adequate to satisfy the objectives of the Act. *Id.* at 428-29.

The incumbents have publicly proclaimed that *USTA* means that the availability of UNEs should now be radically constricted. But *USTA* permits no such result. To the contrary, particularly when the decision is read in light the Supreme Court's *Verizon* decision – as it must be – *USTA* squarely forecloses the adoption of the incumbents' claims on the record before the Commission here. The fundamental fact is that although the record before the Commission in the *UNE Remand Order* was thin and primarily theoretical and predictive, there are now over three years of actual marketplace experience with UNE-P and with the effects of UNE availability on competition and on investment. This experience dramatically underscores that, in today's market, the natural monopoly characteristics of the ILECs' local exchanges mean that the only alternative to competition through UNE-P (and self-provisioned packet switching in line-splitting arrangements) is *NO COMPETITION AT ALL* for residential customers and low volume business locations. The experience further confirms that, although CLECs have enormous

incentives to invest in alternative facilities whenever they believe they can do so at costs that are even close to the price of a UNE, (i) there are numerous interrelated barriers to entry through alternative facilities, (ii) past efforts to invest have led to underutilized competitive facilities, bankruptcies, and waste, and (iii) CLECs cannot efficiently incur such investments unless UNEs are available. UNEs thus promote investment by CLECs. Moreover, the Supreme Court has recognized that it is "commonsense" that ILECs also have significant incentives to invest when, as here, unbundling leads to some facilities-based competition. This common sense proposition has been abundantly confirmed by the statistical evidence demonstrating that CLEC rights to obtain UNEs under favorable conditions have no adverse effect upon, and if anything have affirmatively promoted, investment by ILECs.

In this regard, the situation here is precisely analogous to the one the Commission faced after its 1999 collocation rules were vacated and remanded by the D.C. Circuit on the ground that the Commission failed to give any "limiting" effect to the term "necessary" in section 251(c)(6). *See GTE Services Inc. v. FCC*, 205 F.3d 416 (D.C. Cir. 2000). Although the incumbents claimed that the D.C. Circuit's decision required that the collocation rules be gutted, an extensive record that detailed the technological and economic facts requiring broad collocation was compiled for the first time in the remand proceeding. On the basis of that greatly enhanced record, the Commission adopted *expanded* collocation requirements (*e.g.*, by requiring collocation of certain switching equipment) in an order that the D.C. Circuit has since "easily" upheld. *Verizon Telephone Cos. v. FCC*, No. 01-371 (D.C. Cir. June 18, 2002). A comparable outcome is required here, for as the Commission recognized, the most probative evidence in making unbundling determinations is "actual marketplace experience" (*Notice*, ¶ 2), and the evidence

presented by CLECs – as confirmed by the State commissions who are responsible for day to day administration of the Act – compels adoption of AT&T's proposals.

AT&T's reply comments are organized as follows. Part I discusses the impairment standard to be applied in light of the decisions in *Verizon* and *USTA*. It demonstrates that *USTA's* criticism of the impairment standard adopted in the *UNE Remand Order* is very narrow by its own terms and must be so read in light of *Verizon*. It further demonstrates that the cost and other disparities CLECs rely on here to support their claims of impairment are all directly "linked" to natural monopoly characteristics of the relevant ILEC facilities and establish that they are not suitable for competitive supply by multiple firms – particularly if UNEs are not available.

Part II addresses the significance of subsidies to the Commission's impairment determinations. It demonstrates that section 254 of the Act and the Supreme Court's holding in *AT&T v. Iowa Utilities Bd.*, 525 U.S. 366, 392-93 (1999), permit the Commission to declare that any existing implicit subsidies in local retail rates are irrelevant to unbundling determinations under section 251(d)(2). And in all events, it demonstrates that the evidence establishes CLECs suffer a "net impairment" if they cannot use UNEs to serve customers who are charged "above-cost" rates, and that CLECs are impaired in efforts to provide telecommunications service to any "rural and/or residential customers" who receive "underpriced" service.

Part III addresses the ILECs' claim that unbundling saps the ILECs' incentive to deploy "new" and "broadband" facilities and shows that in fact the opposite is true. As the Supreme Court has held, it is "commonsense" that the competition facilitated by unbundling gives the ILECs incentives to upgrade their facilities. *Verizon*, 122 S. Ct. at 1676 n.33. This "commonsense" is confirmed by marketplace evidence showing that, despite existing unbundling

rules, the ILECs have already upgraded their networks to provide DSL-based services to the majority of their customers. And this "commonsense" is confirmed by hard empirical evidence that flatly disproves the ILECs' hypothesis. Part III also refutes the ILECs' alternative claim that unbundling NGDLC loops is costly. As explained therein, the costs of providing access to the "unified loop" at the central office are minimal, especially compared to the alternatives the ILECs propose.

Part III further supports the position that the Commission should work aggressively to promote the deployment of FTTH because this technology promises revolutionary changes that could enormously benefit consumers and the economy. The record is clear, however, that even under the most optimistic assumptions FTTH is still in its infancy and numerous economic and other issues must be resolved before FTTH can be widely deployed. Thus, future prospects for FTTH do not support ILEC claims that the Commission should restrict CLEC access to unbundled NGDLC loops, especially since there is no real prospect that allowing access to such loops will prevent or impair the deployment of FTTH. It is clear that the current judgment of the investment community – and the ILECs themselves – is that FTTH is too expensive to implement on anything other than a trial basis, and no ILEC has plans to do more in the near term. Moreover, there are other significant issues, both practical and cost-related, that affect both the supply of and demand for FTTH that must be resolved before FTTH can be broadly implemented. For these reasons, AT&T supports the adoption of a separate proceeding in which the Commission takes a comprehensive look at the subject in order to determine the best way to ensure deployment of this technology, while not undermining the Act's goal of opening local markets to competition.

Part IV rebuts the flip side of the ILECs' investment argument – that unbundling impairs CLECs' incentives to invest in facilities. Again, the record overwhelmingly demonstrates that unbundling promotes CLEC facilities-based investment and that many CLECs radically *over*-invested in their own facilities before they had developed the customer bases necessary to support such investments. Indeed, the "capital crisis" in telecommunications is largely a function of the fact that too many fledgling competitors accepted the ILECs' "build it and they will come" philosophy and have been forced to recognize that the natural monopoly characteristics of local telephone markets preclude such a strategy. In all events, however, basic economics predicts that CLECs will, whenever possible, invest in their own facilities whenever it is economically feasible in order to avoid dependence upon the ILECs – their principal competitor – as a source of critical inputs. Likewise, *USTA* recognizes that a key benefit of UNEs is that they serve as a "bridge" that allows CLECs to overcome natural monopoly entry barriers to the deployment of their own facilities. And this economic theory is borne out not only by the substantial facilities investments made by AT&T and other CLECs since adoption of the Act, but also by econometric evidence showing that AT&T's facilities investments are much greater in States that require ILECs to provide reasonable access to UNEs.

Part V summarizes the views of State commissions on the issues raised in the *Notice*. The States uniformly agree that the Commission should retain its current national list of UNEs in general and ensure the availability of UNE-P and broadband related elements in particular. In this regard, the State commissions show that existing levels of intermodal competition have been insufficient to constrain ILEC market power. Their comments also confirm that the States are in the best position to assess local market conditions and, therefore, should be assured that they

may continue to extend the national list of UNEs as competitive conditions warrant in their jurisdictions.

Parts VI through X addresses the application of the impairment standard to individual elements. Part VI addresses impairment regarding loops in general. This part demonstrates that loops – including high-capacity loops – are quintessential bottleneck facilities that are "wasteful" to duplicate. It also demonstrates that CLECs face a host of additional entry barriers in any effort to self-deploy loops. In particular, it shows that the ILECs enjoy enormous first mover advantages. Whereas ILECs were able to obtain easy access to public rights of way and all commercial buildings, municipalities and building owners uniformly refuse to provide CLECs equivalent access and routinely impose a host of discriminatory conditions for such access or refuse it altogether. Finally, this part rebuts ILECs' claims that the "real" level of loop deployment by CLECs is well in excess of the data that the CLECs have reported to the Commission. This claim is flatly untrue and is based on flawed methodologies, including one that considers CLEC purchases of special access as though they were self-deployed loops. Thus, all the ILECs have proven is the extent to which CLECs remain dependent upon ILEC facilities to reach customers.

Part VII addresses NGDLC loops. This part demonstrates once again that CLECs are impaired without unbundled access to the unified loop element – just as they are impaired without access to all other types of loops. In particular, this part details how the cost and other disparities CLECs face with respect to unified loops go to the heart of the ILECs' natural monopoly. In fact, the record reinforces AT&T's prior showings that the potential alternatives to accessing the unified loop – self-provisioning loop facilities, collocation at (or near) remote terminals, and utilization of spare copper – are prohibitively expensive, provide materially

inferior access, or are technically impracticable in all circumstances in which the ILECs use the same architecture to provide both voice and DSL-based services. AT&T also responds to the ILECs' hypothetical arguments concerning the availability of practical substitutes. In particular, AT&T shows that the CLECs' real-world experience demonstrates CLECs cannot enter the market using the ILECs' proposed alternatives. In addition, AT&T sets forth the legal and factual reasons why the existence of cable modem service does not provide a cognizable alternative to unified loop unbundling. Finally, this part responds to specific ILEC arguments that mischaracterize the NGDLC architecture and misread the law in an attempt to limit the CLECs' right to access the unified loop as an unbundled network element. As AT&T shows in detail, the loop element, *not* packet switching, is the relevant reference point for any consideration regarding whether competitors are impaired without unbundled access to such facilities.

Part VIII addresses dedicated transport. This part shows that, just like loops, transport facilities are characterized by enormous economies of scale and sunk costs, and therefore have strong natural monopoly characteristics. In addition, this part demonstrates that the same first mover advantages the ILECs enjoy with regard to rights of way also impair CLECs' ability to self-deploy transmission facilities. And even in the few instances in which transport facilities could be self-deployed profitably, and in which rights of way are available, existing use and commingling restrictions prevent CLECs from aggregating sufficient traffic to gain the same economies of scale as ILECs. These basic economic barriers to competitive deployment of transport are confirmed, and not refuted, by the marketplace evidence. Contrary to the ILECs' claims, there is not a vibrant "wholesale" market for transport. Indeed, the ILECs' "poster child" for wholesaling transport, MFN, has gone bankrupt, taking with it two billion dollars in Verizon

investment. And as to the CLECs that remain in the market, the transport facilities that they have deployed are quite limited and generally traverse the same few routes that can support competitive alternatives. Thus, the ILECs simply fail to show that, if dedicated transport were freed of unbundling requirements, CLECs would have a realistic possibility of being able to obtain (or construct) alternative facilities at comparable unit costs to the ILECs.

Part VIII also demonstrates that the Commission must now eliminate the "interim" use and commingling restrictions on use of existing loop/transport combinations and that, in light of the Supreme Court's reinstatement of the "new combination" rules (47 C.F.R. §§ 51.315(c)-(f)), the Commission must authorize unrestricted access to new loop-transport combinations. These restrictions have operated to preclude competition in exchange access services, prevented use of loop/transport combinations to provide local service, and impeded the CLECs' ability to provide service through their own facilities.

Part IX addresses local switching. This part shows CLECs' impairments in accessing voice-grade loops with their own switches, and explains why ILEC switching must be unbundled as part of a UNE-P combination for CLECs seeking to serve any customer location that requires only voice-grade loops. Without such unbundling, CLECs cannot, as a practical, economic, or operational matter, use their own switches to connect to those loops, and thus are precluded from serving the vast majority of the nation's customer premises.

Unlike the ILECs, whose monopoly-funded networks are designed so that voice-grade loops already connected to ILECs switches by simple cross-connect jumper wires, CLECs face three impairments in connecting such loops to their own switches. First, the manual hot cut process used to cutover loops inevitably leads to outages and other service problems that ILEC customers do not experience and customers will not accept. Second, the ILECs have equipped

an increasing percentage of loops with digital loop carrier ("DLC") equipment, which increases the efficiency of their loop plant but makes it practically and economically impossible for CLECs to obtain nondiscriminatory access to such loops. Third, CLECs – but not ILECs – face significant costs to extend their customers' loops to their switches, requiring them to incur collocation and transport-related costs that the ILECs do not. Significantly, these impairments squarely meet even the standard of impairment set forth in *USTA* because each of these impairments is directly "linked" to the CLECs' difficulties in accessing customers served by the ILECs' natural monopoly voice-grade loops. For these reasons, all CLECs and all State commissions support the broad availability of unbundled switching as part of a UNE-P combination.

Predictably, the ILECs advocate the complete elimination of unbundled switching, but they fail to refute the CLECs' marketplace evidence of impairments that are directly tied to the central natural monopoly characteristics of the incumbents' networks. The ILECs point merely to switch deployment and line counts, but their figures – which are exaggerated – fail to account for the CLECs' direct evidence that CLECs cannot practically or economically *use* even the switches they have deployed to serve the large majority of customer locations whose low usage levels merit only the use of voice-grade loops. Given these significant impairments – all of which are rooted in the ILECs' inherently discriminatory network architecture – the Commission should make clear that it will not consider removing local switching (and UNE-P) from the unbundling requirements for customers served by voice-grade loops unless and until the ILEC has implemented a workable electronic loop provisioning process that eliminates the need for manual hot cuts and there is evidence that a competitive market for local switching has developed.

Part IX also explains that the Commission should likewise confirm that ILECs are required to provide "transiting" at TELRIC rates. Even if (and to the extent) that ILECs are freed from obligations to provide unbundled switching, that does not alter the ILECs' separate duty to make their switching and related functionalities available to competitors for use in terminating traffic, whether such traffic is terminated directly to ILEC customers (*i.e.*, reciprocal compensation) or to the customers of other carriers (such as other CLECs, CMRS providers and neighboring ILECs) who are also directly interconnected with the ILEC. In all such cases, sections 251(c)(2), 251(c)(3) and 252(d)(1) require the ILECs to provide interconnection functionalities at TELRIC-based rates.

Part X addresses the other UNEs – shared transport, signaling, databases, and OSS. First, CLECs who use unbundled ILEC switching would clearly be impaired without access to shared transport. Shared transport is necessary to enable CLECs to use ILEC switching cost-effectively and provide comparable service quality to the ILEC. The Commission has already found that requiring CLECs to build (or lease) dedicated transport in these situations would obviously be wasteful because it would require CLECs to invest in capacity that would never be fully utilized. Second, signaling must be available to any CLEC who uses switching, for the Commission has recognized that the use of ILEC switching *requires* the use of ILEC signaling, and the ILECs do not argue otherwise. Third, in the case of databases, only the ILECs are in position to populate accurately the CNAM and LIDB databases. Attempts by CLECs to do so would result in wasteful expenditure of resources to create inadequate databases. Lastly, even the ILECs do not contest that CLECs cannot obtain nondiscriminatory access to UNEs, ILEC services and interconnection unless they make their OSS available as an unbundled element.

Finally, Part XI addresses the role of the States and preemption issues. Given the States' virtually unanimous support for the current UNE list (and even for an expanded list), the ILECs urge broad scale preemption of State unbundling determinations. This request is foreclosed by the plain text of the Act, and it has been repeatedly rejected by the Commission. Even the Supreme Court has acknowledged that, in implementing UNEs, the Commission's unbundling determinations constitute a *floor*, and that States may build upon those determinations to establish additional such obligations under both federal and state law – as many States have done.

Part XI also explains that the State commissions should have the lead role in any future "granular" "de-listing" of UNEs. Even if the Commission were to remove a UNE from the national list, a State commission may preserve that UNE on its State list, either under existing federal law, existing or new state law, or both. Accordingly, no UNE can be removed from the list of available UNEs in any individual State unless both this Commission and the State commission concur. Thus, if and when existing national barriers to the self-deployment of network facilities are eliminated, the Commission should establish a cooperative process in which the Commission establishes the guidelines by which impairment should be judged and State commissions take the lead in developing the factual evidence and applying that evidence to the controlling legal standard.

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Access Reform Order	First Report And Order, *Access Charge Reform et. al.*, 12 FCC Rcd. 15982 (1997)
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AOL-Time Warner Merger Order	Memorandum Opinion And Order, *Applications For Consent To The Transfer Of Control Of Licenses And Section 214 Authorizations By Time Warner Inc. And America Online, Inc., Transferors, To AOL Time Warner Inc., Transferee,* CS Docket No. 00-30, 2001 WL 55636 (2001)
AT&T Non-Dominance Order	Order, *Motion of AT&T Corp. to be Reclassified as a Non-Dominant Carrier*, 11 FCC Rcd. 3271 (1995)
Bell Atlantic-NYNEX Merger Order	Memorandum Opinion And Order, *Applications Of NYNEX Corp., Transferor, And Bell Atlantic Corp., Transferee, For Consent To Transfer Control Of NYNEX Corp., And Its Subsidiaries,* 12 FCC Rcd. 19985 (1997)
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Attachment	Declarations Attached To Reply Comments
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C	Anthony Fea and Anthony Giovannucci (Fea-Giovannucci Reply Dec.)
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	Alice Marie Carroll and Cynthia Rhodes CC Docket No. 96-98 (filed April 5, 2001) (Carroll-Rhodes Use Restriction Dec.)
	Anthony Fea and William Taggart CC Docket No. 96-98 (filed April 30, 2001) (Fea-Taggart Use Restriction Dec.)
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	Joseph P. Riolo CC Docket No. 98-147 (filed Oct. 12, 2000) (Riolo NGDLC Dec.)
	Robert Willig CC Docket No. 01-337 (filed March 1, 2002) (Willig LEC BB Dominance Dec.)
	Robert Willig CC Docket 02-33 (filed May 3, 2002) (Willig Wireline BB Classification Dec.)

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Implementation of the Local Competition Provisions of the Telecommunications Act of 1996	)	CC Docket No. 96-98
	)	
	)	
Deployment of Wireline Services Offering Advanced Telecommunications Capability	)	CC Docket No. 98-147
	)	

REPLY COMMENTS OF AT&T CORP.

Pursuant to the Commission's *Notice*, AT&T Corp. ("AT&T") respectfully submits its Reply Comments in this proceeding concerning the availability of unbundled network elements under sections 251(c)(3) and 251(d)(2) of the Communications Act of 1934, as amended (the "Act"), 47 U.S.C. §§ 251(c)(3), 251(d)(2).

INTRODUCTION

The Commission instituted this proceeding to determine whether its current unbundling rules remain faithful to the requirements of the 1996 Act and to the objective of promoting switch-based and other types of facilities competition. AT&T's initial comments demonstrated that while the Commission's existing list of UNEs continues to be necessary, switch-based competition has been severely impeded by (1) the current rules' restrictions on access to unbundled switching, to loop-transport combinations, and to next generation digital loop carrier ("NGDLC") loops *and* (2) characteristics of the incumbents' existing networks that prevent

competitive carriers ("CLECs") who self-provision circuit switches from accessing monopoly local loops on terms and costs that are remotely comparable to those that the incumbents' switches enjoy. AT&T thus proposed that the Commission eliminate or modify these restrictions and provide that unbundled switching will remain available for all customer locations served by voice-grade loops until an incumbent local exchange carrier ("ILEC") has implemented electronic loop provisioning and a competitive market for local switching has developed. AT&T's positions were broadly supported in comments of State commissions and CLECs but opposed by the ILECs and their suppliers and surrogates.

Since the filing of the opening comments, two major judicial decisions have been issued that bear directly on the issues in this proceeding. In *Verizon Tel. Cos. v. FCC*, 122 S. Ct. 1646 (2002), the Supreme Court upheld the Commission's network element pricing and new combination rules on grounds establishing that broad unbundling is not just permitted, but required, by the objectives of the Act. Specifically, the Supreme Court held that ending incumbents' monopolies and creating local competition is an "end in itself" under the Act and that the Act is designed to "jump-start" local competition by "reorganiz[ing]" the incumbents' monopolies to "make them vulnerable to interlopers" and by giving "aspiring competitors every possible incentive to enter local retail telephone markets, short of confiscating the incumbents' property." *Id.* at 1654, 1661. The Court recognized that the ILECs "have almost an insurmountable competitive advantage" over new entrants and that the Act is intended to allow "hundreds" of new entrants to access elements that are "costly to duplicate" even if there are some "large competitive carriers" with the "resources" to replicate the elements economically. *Id.* at 1672 & n.27.

But ten days later, in *United States Telecom Ass'n v. FCC,* 290 F.3d 415 (D.C. Cir. 2002) ("*USTA*"), the D.C. Circuit remanded the Commission's 1999 *UNE Remand Order* and vacated and remanded its *Line Sharing Order.* Critically, *USTA* did *not* pass on the validity of the Commission's decision to order the unbundling of any specific elements, and the Court did not direct the Commission to exclude any particular elements from the unbundling requirements on remand. But the Court held that there were deficiencies in the prior orders, and gaps in evidence and explanation, that had to be remedied on remand. Of most direct relevance here, the D.C. Circuit held, relying on *Verizon,* that the *UNE Remand Order* had adopted an impairment standard that was overbroad in one respect. The Court concluded that the standard had improperly permitted the Commission to rely on cost disparities that were "universal" between new entrants and incumbents in all markets, rather than only those disparities that are "linked (in some degree) to natural monopoly" characteristics and that can render an element "unsuitable" for "competitive supply" by "multiple" firms. *USTA*, 290 F.3d at 426-28.

The Court further concluded that the Commission's decision to adopt national unbundling rules that "apply to every geographic market and customer class" had been inadequately explained. *Id.* at 422-26. The Court was concerned that the Commission may have adopted national rules because it failed to consider "market specific variations in competitive impairment," lumped all customers together into a single market, and ordered unbundling for all customers, even though there may have been large business or other customer classes that CLECs could profitably serve through facilities obtained outside the ILECs' networks. In particular, the Court stated that the Commission had not explained why it ignored the effects of the historic practice of promoting universal service by requiring incumbents to provide

"underpriced" service to certain "rural and/or residential customers" and to allow incumbents to make up the difference by charging above cost-rates to other customers. *Id.* at 423-24.

In this regard, the Court also held that the Commission had not sufficiently responded to the incumbents' claims that substantial overbreadth in unbundling rules is not "costless," but could lead to reduced investment by both CLECs and ILECs. The Court stated that the Commission's "only response" to this claim was to point to evidence that both ILECs and CLECs have built facilities since the Act was passed, which, the Court concluded, "tells us little or nothing" about incentives or about what would have occurred if there had been no unbundling. *Id.* at 425. Finally, the Court held that the Commission's *Line Sharing Order* had improperly failed to address claims that the "intermodal" competition provided by cable and satellite internet access services was sufficient to satisfy the Act's objectives and meant that unbundling the high frequency portion of the loop is unnecessary. *Id.* at 426-28.

The incumbents have publicly proclaimed that *USTA* means that the availability of UNEs should now be radically constricted. But *USTA* permits no such result. To the contrary, particularly when the decision is read in light of the Supreme Court's *Verizon* decision – as it must be – *USTA* squarely forecloses the adoption of the incumbents' claims on the record that is here before the Commission. The decisive fact is that the showings that AT&T and other CLECs have made – supported by the comments of all the State utility commission commenters – in no way depend on cost disparities that are "universal" to all markets, but rest on characteristics of the UNEs that are directly linked to natural monopoly characteristics of the ILECs' local exchanges and that can make – and have in fact made – competitive supply of the elements "wasteful." *Compare USTA*, 290 F.3d at 427. These showings are further specific to each

relevant class of customers that could comprise a separate market and fill each gap that the *USTA* Court perceived.

And the comments of incumbents and their supporters have not remotely called into question the detailed factual showings that AT&T and others have made on the basis of the "actual marketplace experience" of the past several years, which the Commission has stated is the most relevant evidence. *Notice* ¶ 2. The ILECs' contrary claims are set forth in the so-called "UNE Fact Report" that consists of arguments authored by the incumbents' lawyers and that is not a statement of facts in any sense of the term. As a Judge on the D.C. Circuit recently stated, the failure to provide actual factual statements is a characteristic of ILECs' pleadings generally,[1] and the ILECs' "Fact" Report is another example of that phenomenon. It opposes the continuation and extension of the unbundling requirements by asserting that CLECs are in fact widely using alternative loop, transport, and switching facilities, and that such facilities are being (or could be used) to serve all classes of customers. But these assertions do not rest on marketplace facts, but rather on statistics that show no such thing and that are meaningless by their terms. Thus, the application of the standards of *USTA* and *Verizon* to the factual record in this proceeding quite clearly require the Commission to adopt the positions that AT&T and other CLECs have advanced, and that State commissions broadly support.

In this regard, the situation here is precisely analogous to that which the Commission faced after the D.C. Circuit had vacated and remanded the Commission's 1999 collocation rules on the ground that the Commission failed to give any "limiting" effect to the term "necessary" in

[1] *See* Tr. of Oral Argument, No. 01-1371, at 12 (D.C. Cir. May 10, 2002) ("THE COURT: . . . the factual statement [in the ILEC Brief] is an argument. It's not a statement of facts. So we actually have three arguments in [the ILECs'] brief. You have the factual statement, then you have the summary of argument, then you state the argument again.").

§ 251(c)(6). *See GTE Services Inc. v. FCC*, 205 F.3d 416 (D.C. Cir. 2000). The incumbents claimed that the D.C. Circuit's decision required that the collocation rules be gutted. But the record that had led to the 1999 rules had been very limited, and on remand, a detailed factual record was compiled that made the showing required under the D.C. Circuit's decision and that for the first time set forth the technological and economic facts that meant that broad collocation was required for CLECs to access loops and other facilities on nondiscriminatory terms. On the basis of this more extensive record, the Commission *expanded* the ILECs' collocation duties (*e.g.*, by requiring collocation of certain switching equipment) in an order that the D.C. Circuit has now "easily" upheld. *Verizon Telephone Cos. v. FCC*, No. 01-371 (D.C. Cir. June 18, 2002) ("*Verizon Collocation*").

Similarly, the "gaps" of explanation and evidence that the D.C. Circuit identified in the *UNE Remand Order* were largely products of the very limited record in that proceeding. At the time, the *First Report and Order* had only been in effect for about three years, and there had been no substantial actual marketplace experience with the use of UNEs or of alternatives to them. For example, CLECs' experience with self-provisioned switching was then essentially confined to serving customers who use DS-1 or higher capacity loops that do not require hot cuts, and there was virtually no experience with DLC loops, only trivial experience with the hot cut process, and no experience showing business customers would reject services that require hot cuts – as they since have. Due to the Eighth Circuit's erroneous invalidation of Rule 315(b),[2] there had also been no significant experience with the use of the UNE-Platform ("UNE-P") to serve residential or other customers, and because the incumbents' DSL offerings were effectively

[2] *See Iowa Utils. Bd. v. FCC*, 120 F.3d 753, 813 (8th Cir. 1997), *rev'd, AT&T Corp. v. Iowa Utils. Bd.*, 525 U.S. 366, 393-95 (1999) ("*IUB*").

nonexistent, there was similarly no experience with the effects of intramodal competition on them. Finally, there was then no basis whatsoever to compile any statistically significant data on the effects of UNEs on investment. For all these reasons, the records in the *UNE Remand* and *Line Sharing* proceedings were thin and primarily predictive and theoretical.

But the intervening years have resulted in extensive actual marketplace experience, both with UNEs and with CLECs' attempts to compete without them. In particular, this experience has allowed AT&T and other parties to make extraordinarily detailed factual showings here of the effects that UNE availability have on competition and investment. In this regard, as the Commission and the courts have held, the Act shows no "preference" for facilities-based competition, but authorizes multiple forms of entry and relies on marketplace forces to determine whether and to the extent each form of entry will occur and be successful.[3] Two points are quite clear from the resulting actual marketplace experience.

First, for residential customers today, the only alternative to competition throughout UNE-P is *no* competition. For in states where there are high UNE rates or no or poor OSS for UNE-P, no residential competition has developed. Conversely, UNE-P has produced extraordinary benefits in New York and other states where conditions permit service to residential customers, for CLECs provide genuine value for customers by obtaining combinations of loop, switching, and transport and self-provisioning retail and other functions (and packet switching in line-splitting arrangements).

Second, during this time, CLECs have made further extraordinary efforts to invest in other alternative facilities to provide services to all customer classes and business customers in

[3] *Local Competition Order* ¶ 12; *Iowa Utilities Bd.*, 120 F.3d at 816-17, *aff'd on this ground, IUB*, 525 U.S. at 392-93.

particular. This experience demonstrates the ways that the various interrelated barriers to facilities-based entry – and certain aspects of the Commission's rules – have led to underutilized and stranded investments, bankruptcies, and other forms of waste when CLECs have attempted to self-provision loops, transport, and switching to serve different classes of customers under the current rules. Indeed, these are the very events that created what Chairman Powell has described as "a severe capital crisis putting a tremendous strain on the telecommunications industry."[4]

These marketplace facts fill in each of the evidentiary and explanation gaps *USTA* identified.

> *First*, they establish that denials of access to UNEs "impair" CLECs from competing under *USTA's* narrower interpretation of that term in each relevant product and geographic market.
>
> *Second*, although existing implicit subsidies are irrelevant to unbundling determinations under the Act's terms and structure and the Supreme Court's decisions, the evidence in this record establishes impairment even at the prevailing retail rates that reflect any such subsidies.
>
> *Third*, there is now detailed evidence that unbundling has no adverse effect on CLECs' incentives to invest, that it is a necessary precondition to CLEC investment, and that unbundling has had (and could have) no adverse effect on the ILECs' broadband or other investments.
>
> *Fourth*, the marketplace experience demonstrates that intermodal competition from cable operators and others is not yet remotely at a stage at which it could enable the Commission to conclude that unbundling will no longer provide further net benefits to competition and consumers.

Each of these points is discussed in more detail below.

CLECs Will Be Severely Impaired In Providing Service And Consumers Will Be Harmed If Access To Loops, Transport, And Switching Is Restricted. *USTA* and *Verizon* have two primary teachings for the Commission's impairment analysis. First, the Commission

[4] *See* FCC New Release, *FCC Chairman Michael Powell Appointed to President Bush's Corporate Fraud Task Force* (July 9, 2002).

must consider "market specific variations in competitive impairment" and cannot – absent further explanation – adopt national unbundling rules when there are separate product or geographic markets in which CLECs can profitably provide service without using particular UNEs. Consistent with AT&T's understanding of the *UNE Remand Order*,[5] AT&T's impairment showings here are specific to *each* class of customers or service arrangement that could possibly comprise a separate market where there could be "variations in competitive impairment" and where an exception to unbundling requirements could be practically administered by States without creating costly litigation and other burdens. Because the factors that establish impairments equally apply in all geographic areas, there are no separate geographic markets that affect these impairment determinations.

Second, the Court found that the *UNE Remand Order's* impairment standard was overbroad insofar as – and only insofar as – it permitted determinations to rest on scale economies and resulting cost disparities that are "universal" to incumbents and new entrants in all markets. The holding was thus quite narrow. The *UNE Remand Order* adopted a multi-factor test of impairment that focused on differences in costs, timeliness, quality, operational and technical characteristics, and ubiquity. It further required consideration of three different kinds of cost disparities: (1) whether there were economies of scale that give new entrants higher unit costs "particularly" in early stages of entry (¶ 76); (2) whether CLECs would need to make "sunk" investments that give incumbent "first mover advantages" and are "barriers to entry"

[5] Contrary to the discussion in *USTA*, the *UNE Remand Order* (¶ 120) addressed all the "specific product and geographic markets," and to the extent that it adopted national unbundling rules, it was because the Commission found that there were no geographic or product markets in which CLECs would not be impaired if access to particular UNEs were denied and in which administrable exceptions to nationwide unbundling could not be established. *Id.* ¶¶ 184-86 (high-capacity and other loops); *id.* ¶¶ 276-99 (switching); *id.* ¶¶ 434-48 (dedicated transport).

through alternative facilities (¶ 77); and (3) whether CLECs would incur "additional costs" that incumbents did not in connecting self-provisioned elements to monopoly elements and that thus also represent barriers to facilities-based entry (¶ 78).

The only aspect of the *UNE Remand Order's* standard that *USTA* rejected was its reliance on economies of scale that were readily surmountable and that operated only to give CLECs higher average costs "in the early stage of entry." *USTA*, 290 F.3d at 426-28; *compare UNE Remand Order* ¶ 76. The Court held that this was an impermissible factor because it was a cost characteristic that applies both to incumbents and new entrants in *all* markets, including competitive ones, and was thus "universal." *USTA*, 290 F.3d at 427. The Court stated that such disparities are in no way "linked" to the existence of economies of scale that give incumbents lower average costs than any new entrant across the entire range of the demand, that render elements "essential facilities" or "natural monopolies," and that make efforts to duplicate them "wasteful." *Id.* at 426.

USTA expressly stated that it is *not* holding "that the Act requires use of the criteria of the [essential facilities] doctrine" or that a facility must in fact be a natural monopoly that only a single firm can supply. Nor could *USTA* have held otherwise. Any such holding is foreclosed by *Verizon's* conclusion (122 S. Ct. at 1672 n.27) that the Act is intended to authorize "hundreds" of smaller entrants to access facilities that are "costly to duplicate" even if large "competitive carriers" would have sufficient resources to do so, and *USTA* expressly relied upon – and of course must be read in light of – *Verizon*. Thus, rather than require a showing of "natural monopoly," *USTA* merely stated that cost disparities must be "linked (*in some degree*) to natural monopoly" "characteristics" that make the element "unsuitable" for "*multiple*" competitive supply and mean that self-provisioning could be "wasteful." *USTA*, 290 F.3d at

296-98 (emphasis added). Thus, whether or not there are cable operators or other uniquely situated carriers who do not require UNEs, impairment still exists if typical CLECs that seek to provide service through alternative facilities would incur substantial costs and risks that the incumbent have not incurred and will have higher unit costs than the incumbent across the relevant levels of demand. In such cases, typical (and efficient) CLECs then face real "barriers" to their "entry" through alternative facilities. *See* G. Stigler, THE ORGANIZATION OF INDUSTRY 67 (1968); *Bell Atlantic-NYNEX Merger Order* ¶ 129 n.247.

In this regard, two kinds of cost disparities that the *UNE Remand Order* relied upon, and that *USTA* did not disapprove, directly identify such entry barriers. First, this is obviously the case with cost disparities that require CLECs who self-provision facilities to incur "additional costs" to connect self-provisioned facilities with the incumbent's other elements, for the CLECs must incur costs that incumbents did (and do) not. *UNE Remand Order* ¶ 78. Second, this is even more dramatically the case when a CLEC's self-provisioning of elements requires investments that duplicate incumbent facilities that have already been installed and that cannot be deployed for another purpose if the CLEC exits the market. The need to incur such "sunk costs" means that the CLEC inherently incurs costs and risks than the incumbent did not and erects "barriers to entry" through alternate facilities and gives incumbents "first mover advantages." *UNE Remand Order* ¶ 77; Willig Reply Dec. ¶¶ 18-35.

Indeed, whether or not there are economies of scale that give incumbents' lower costs than new entrants across all levels of demand, investments in alternative facilities are truly "wasteful" *only* when the investments will be "sunk" and incapable of being re-deployed for another productive purpose if the new entrant is unable to profit and exits the market. *See* Willig Reply Dec. ¶ 22. Accordingly, when facilities entry requires sunk investment, CLECs generally

cannot economically make such investments unless they can first lease facilities from the incumbent and use them to build up a customer base that will generate sufficient revenues to support the investment. *See* Willig Reply Dec. ¶¶ 27-28. Indeed, *USTA* acknowledged all these facts, for it noted that a legitimate benefit of unbundling is that "may enable a CLEC to enter the market gradually, building a customer base up to the level where its own investment would be profitable." 290 F.3d at 424.

Here, the physical and economic characteristics of the facilities at issue themselves establish that CLECs face all or some of these entry barriers if they self-provision loops, transport, or switching. Beyond that, because the 1996 Act has eliminated *de jure* entry barriers, the past four years have permitted "market tests" of whether barriers to facilities-based entry are easily surmounted or whether particular facilities have "some degree" of natural monopoly characteristics. The fact that firms who deployed alternative transport and switching have experienced significant under-utilization of such facilities – and widespread bankruptcies – is thus obvious and direct evidence of impairment. This real marketplace evidence was not available before the *UNE Remand Order* was decided. Thus, it is quite ludicrous for the incumbents to claim – as they do here – that the fact of actual deployment should be dispositive of the Commission's impairment analysis and that evidence that those very investments turned out to be wasteful should be ignored. In all events, the fact of impairment is clear for each of the UNEs at issue.

Voice-Grade And High-Capacity Loops. All voice-grade loops, whether they are end-to-end copper or combinations of copper and fiber in digital loop carrier ("DLC") architectures, are quintessentially facilities with natural monopoly characteristics. With the possible (and irrelevant) exception of cable television operators, no firm could economically duplicate the

functions provided by these loops because they have economies of scale that give them declining average costs across all levels of demand, and CLEC loops are sunk investments that could not be used for any other purpose.

The incumbents' claims are thus focused on the high-capacity loops used to serve high-volume customers. But these facilities are also characterized by scale economies that give incumbents lower average unit costs than CLECs across all relevant levels of demand. And even in the exceptional situations in which CLECs may be able to achieve unit costs of constructing, deploying, and using loops that are close to those of the incumbents, there are additional barriers to facilities-based entry that mean that CLECs will be impaired in serving such customers (and in ever deploying their own loops) unless they can obtain high-capacity loops as UNEs. Because any CLEC loop investments would be "sunk," they could not even consider constructing facilities unless they can serve a customer through UNEs first and also obtain sufficient future customer commitments that would allow them to build. Even then, CLECs need acces to such loops as a UNE because CLECs do not have the same access to rights of ways and building access rights that incumbents received as a matter of course as "first movers," and because it takes substantial time to construct facilities even if the necessary rights of ways and building access rights can be obtained. Each of these disparities is directly linked to natural monopoly characteristics of loops. Collectively, these disparities demonstrate that CLECs generally have no alternative but to use incumbents' loop facilities and that their ability to provide service (and to build loops in the future) is impaired if loops are not available as UNEs.

The ILEC Report offers no direct response to these dispositive economic facts. Rather, it advances other arguments that are legally irrelevant and factually erroneous. For example, the ILECs assert – based on statistics taken from the E911 database – that CLECs have deployed

some 11-19 million of their own loops. Even if this were so – as it patently is not – it could only establish, as the FCC previously found, that CLECs were not impaired in deploying these *particular* loops and cannot alter the economic facts that establish impairment generally. *See UNE Remand Order* ¶ 184. But the claim is an utter fabrication. Quite apart from the fact that the E911 database is assembled for other purposes and cannot be a reliable indicator of the number of CLEC-provided loops, the incumbents derive their number by subtracting the number of unbundled loops CLECs lease from the total number of lines served through CLEC switches – and ignore that virtually the entire difference between the two figures represents facilities that CLECs have been forced to obtain under the ILECs' special access tariffs, due to the use and commingling restrictions on loop/transport combinations. Thus, ILECs are treating the facilities that CLECs must obtain under special access tariffs as self-provided CLEC loops. That is nonsense.

These same facts establish that CLECs are impaired by the features of the FCC's rules that deny them access to unified NGDLC loops in the incumbent's central offices. These facilities have the same natural monopoly characteristics as other types of loops, and the potential alternatives to accessing unified loops to which incumbents refer – self-provisioning loop facilities, collocation at (or near) remote terminals, or utilization of space copper – are prohibitively expensive, provide inferior access, and/or are technically infeasible.

Transport. Dedicated transport is required, among other things, to connect the particular buildings in which a CLEC deploys switching and other facilities to the ILEC wire centers that terminate the CLEC customers' loops. The CLEC thus requires dedicated transport facilities on specific *point-to-point* routes.

Transport also has obvious natural monopoly characteristics. The fixed costs of a dedicated transport facility (trenching and laying the conduit and strands of fiber cables) are immense, and the marginal costs of adding additional capacity to an existing fiber facility (activating dark fiber or adding new electronics to existing fiber) are relatively small. Thus, incumbents can always serve new demand at a lower incremental cost than a new entrant would incur, and incumbents have average costs that are constantly declining over the entire demand on any point-to-point route. Moreover, because ILECs can share the principal costs of constructing transport facilities (the construction and supporting structures) with the costs of their ubiquitous loop plant that CLECs cannot replicate, they also enjoy economies of scope that further increase their inherent cost advantage over new entrants. Further, because municipalities see little incremental value in having multiple firms digging up streets and installing transport facilities that merely replicate functions that incumbents provide and that permit no service differentiation, they do not give new entrants the rights of ways – which incumbents received as matters of course – on the same rates or terms that the incumbent enjoy.

As with high-capacity loops, there are only rare circumstances in which CLEC will have traffic volumes that could permit them to deploy transport on a particular route at costs that are close to those that they would incur by leasing dedicated transport as a UNE from the incumbent. But even in these circumstances, the fact that such construction requires sunk investments means that CLECs incur other costs and risks that the incumbents do not. This means CLECs cannot rationally deploy facilities unless and until they have built up a customer base through leasing unbundled transport. Even then, constructing facilities requires substantial time, and can be delayed or precluded altogether if the CLEC cannot obtain the necessary rights of way promptly and on the same terms as the incumbent. The resulting cost disparities and service delays are

directly linked to the natural monopoly characteristics of transport, and they plainly establish that transport is generally unsuitable for competitive supply by multiple firms.

These economic facts have been confirmed by actual marketplace experience. A number of CLECs had responded to the 1996 Act by deploying alternative transport facilities on particular routes and seeking to offer competitive transport. However, the Commission found in 1999 that alternative transport was available on only a fraction of the routes where CLECs needed it. *UNE Remand Order* ¶¶ 340-41. And the decisive fact is that today most of these competitive transport providers are in bankruptcy or on the brink of it, and the rest have transport networks that are radically underutilized. Indeed, even on the routes where there are some alternative transport facilities, there is no proof that a workably competitive wholesale market exists that would assure CLECs access to alternative transport in the quantities they need (large or small) and at efficient cost-based rates – and there are only limited instances in which CLECs have successfully deployed dedicated transport for their own use.

Again, the ILEC's "UNE Fact Report" provides no substantial response. It mindlessly asserts that the fact that transport facilities were deployed on some routes in the past demonstrates that transport can be deployed on all or virtually all routes. But the fact that the CLECs who have deployed competitive transport facilities have been unable to do so profitably, and are in financial distress, means that there generally is no alternative to the incumbent, even on the specific routes where they nominally exist. And it means that there is no prospect for the creation of alternatives elsewhere – even apart from the current capital crisis.

Finally, these same factors establish that the Commission must eliminate the "interim" use and commingling restrictions that apply to existing loop/transport combinations (EELs) and that the Commission must give CLECs unrestricted rights to obtain new such combinations in

light of the Supreme Court's reinstatement of the Commission's "new combination" rule. The Commission's use restrictions prevent CLECs from using UNEs to compete with the incumbents' exchange access services. And although the only basis for the commingling restriction was to protect the ILECs' special access rates and revenues, this restriction has forced CLECs to operate inefficiently and flatly prevented them from using loop/transport combinations to provide competing local service broadly. And, for reasons explained below, denials of access to loop/transport combinations have also severely impaired CLECs' ability to use self-provisioned switching to serve even larger customers.

Switching. *USTA* holds that impairment due to lack of access to unbundled switching cannot be based on the ground that switching equipment is characterized by economies of scale that give CLECs higher average unit costs than incumbents only "at the early stage of entry." 290 F.3d at 427. But this is irrelevant to the CLECs' showing of impairment for switching, which it in no way depends on such "universal" cost disparities.

Rather, the CLECs' impairment showing rests on other cost disparities that are directly and physically linked to the natural monopoly characteristics of local exchanges. Indeed, each of those disparities is a product of the fact that local exchanges were believed to be natural monopolies and built by *de jure* monopolists who designed their exchanges so that local loops could be practically accessed only by a single provider – themselves. The consequence is that even if CLECs had traffic volumes that allowed them to deploy switching equipment at the same unit costs as the incumbent, they today do not receive nondiscriminatory access to monopoly loops and must incur radically higher costs than the incumbent to connect their switches to their customers' loops. These disparities severely impair CLECs' ability to use their own switches to

provide service to customer locations that generate low volumes of traffic and can be profitably served by only voice-grade loops.

First, under the existing network design, all the incumbents' monopoly loops are "hardwired" to their switches, and the large (over 25%) and growing percentage of voice-grade loops that are served through DLC architectures are even more tightly integrated with ILEC switches. This mean that CLECs who use their own switches cannot access voice-grade loops unless they incur substantial additional costs, delays, and quality impairments that the incumbents do not: the delays and costs of "hot cuts" for all voice-grade loops and even more severe costs and delays for DLC loops. These additional costs and delays flatly preclude the economic use of self-provisioned switches to provide service to low volume customer locations.

Second, because incumbent's central offices were designed on the premise that local service would be provided by a monopoly, they cannot (and are not required to) accommodate ordinary circuit switches belonging to competitors. As a result, whereas incumbents connect loops to their switches by running a short jumper wire across a main distribution frame within the central office, CLECs must locate their switches in other (often distant) buildings and must incur radically greater costs to obtain the same connection that costs the incumbents almost nothing. CLECs must incur distance-sensitive transport costs to deliver their customers' calls to their switches and to "backhaul" them to the incumbent's central office for "intraswitch" calls – which are costs that the incumbent does not incur at all. And unless the Commission eliminates restrictions on existing loop-transport combinations, CLECs must not only incur the cost of space and equipment for their switches and "hub" locations, but also must incur the significant costs of collocating transmission equipment in *each* ILEC's central office in which they want to serve customers.

All of these cost disparities are directly and physically linked to the natural monopoly characteristics of the local loop, and their overall effect is that there is only a single class of customers that CLECs can economically serve without reliance on unbundled switching: customer locations that are served by DS-1 and higher capacity loops that generate significantly higher revenues and do not require hot cuts. This is the only segment of the market in which CLECs have had success in using self-provisioned switches, and it accounts for the additional circuit switches that have been deployed since the *UNE Remand* proceeding. By contrast, marketplace experience has demonstrated that where switches have been deployed to serve other business customers, the result has been switches that are not efficiently utilized and, in many cases, that the CLEC has filed for bankruptcy – all of which is graphic proof that the deployment of switches to serve such customers is, under current conditions, "wasteful."

The only way the ILECs can respond to these facts is, ironically, to completely ignore the "market specific variations in competitive impairment" they asked the *USTA* Court to recognize. Their data look only at mere switch deployment, not the class of customers served by such switches or whether those switches have been used profitably. And the ILECs specifically ignore the exact impairments CLECs have clearly demonstrated to the Commission on this record. Such arguments are foreclosed by *USTA*.

Finally, although the economic facts that preclude competitive supply of loops and transport are outside the Commission's ability to affect, the Commission can take action that would help assure the broader development of competition through alternative switching and that could, if other cost impediments are removed, allow the eventual elimination of the unbundled switching requirement in the future. Specifically, the Commission should expressly recognize the inherent practical and cost disparities in loop access that apply to the voice-grade loops that

serve the vast majority of customers, and should make it clear that it will not consider removing unbundled local switching (and UNE-P) for low volume customer locations until an ILEC has implemented a practical form of electronic loop provisioning. Similar requirements were necessary to create full-fledged competition in the long distance market, and they are plainly necessary to achieve the Act's goal of creating local competition by "reorganiz[ing]" the ILECs' local exchanges and making them "vulnerable to interlopers." *Verizon*, 122 S. Ct. at 1661.

Under The Act's Terms And Structure And The Supreme Court's Decisions, Any Existing Implicit Subsidies Are Irrelevant To Unbundling Determinations, And In All Events AT&T's Impairment Showings Reflect The Effects of Any Such Subsidies. The Commission can readily respond to *USTA's* call to explain why the *UNE Remand Order* did not expressly address the ways universal service subsidies can distort competition. Because section 254 of the Act requires elimination of implicit subsidies and the adoption of explicit, portable, and competitively neutral subsidies, any existing implicit subsidies are simply irrelevant to unbundling determinations under sections 251(c)(3) and 251(d)(2). *See IUB*, 525 U.S. 366, 392-93 (1999).

However, the impairment showings on the record here do not ignore the effects of any subsidies that have yet to be removed by the States. That is because the evidence of impairment is based, in substantial part, on the CLECs' historic inability to serve "above-cost" customers through alternative facilities at prevailing retail rates that *include* any implicit subsidies that have not yet been removed. This evidence demonstrates that the CLECs' cost disadvantages in using alternative facilities are not "offset" by any "advantages" they may have because they are not required to provide "underpriced" service and that there is, in *USTA*'s words, a "net impairment" if UNEs are not available. *Compare USTA*, 290 F.3d at 424.

Similarly, the marketplace evidence, as well as the Supreme Court's and the Commission's intervening decisions, allow the Commission to explain the "criteria" under which "impairment" can be found for "rural and/or residential customers" that receive subsidies. *Id.* at 422. Quite plainly, there are conditions in which a State's failure to adopt explicit and portable subsidies could prevent CLECs from using UNEs to serve such customers. But because the absence of UNEs would *further* lessen their ability to provide service now (and will preclude service even when subsidies are made explicit and portable), there is no question that lack of access to UNEs "impairs" CLECs' ability to provide service to these customers. And in those cases in which a CLEC could in fact now use UNEs to serve rural and/or residential customers that receive subsidies, that competition is precisely what Congress intended if it results from the facts (1) that UNEs are available at TELRIC rates, rather than historic cost or (2) that CLECs make money (as does the incumbent) because revenues from access and vertical features more than offset the below-cost rates for basic service. *See Verizon*, 122 S. Ct. 1646 (2002); *Vermont 271 Order* ¶¶ 68-73; *see also Local Competition Order* ¶ 849.

The Evidence Establishes That The Proposed Unbundling Rules Will Have No Adverse Effect On CLEC Or ILEC Investment. *USTA* held that the *UNE Remand Order* had not adequately justified its finding that any substantial overbreadth in its national unbundling rules was costless. It stated that the Commission's "sole" basis for rejecting the incumbents' claim that unbundling had adverse effects on CLEC and ILEC investment was the fact that significant investments had been made by both types of carriers between the passage of the 1996 Act and adoption of the *UNE Remand Order*. The Court said this was insufficient because that evidence did not address incentives and "t[old] us little or nothing" about what would have happened in the absence of these unbundling rules. *USTA*, 290 F.3d at 425.

USTA's concerns are inapposite here, for the unbundling rules that AT&T proposed are based on the fact of impairment in each relevant product and geographic market and are *not* substantially overbroad. But the decisive fact here is that the actual marketplace evidence of the past four years confirms such rules have no adverse effect on levels of investment, and clearly promote greater overall investment. Moreover, the Supreme Court considered some of this evidence in *Verizon* and held that it foreclosed the incumbents' claims.

The point is very clear in the case of CLECs. As explained in AT&T's initial comments, UNE availability plainly fosters CLEC investment. Even though they generally cannot obtain facilities at rates that are as favorable as TELRIC from sources outside the incumbents' networks, dealing with incumbents imposes substantial additional tangible and intangible costs that mean CLECs will invest in alternative facilities whenever the cost is even close to the TELRIC rate (if, of course, investment capital is available). The marketplace experience has borne this out, for rather than withhold investments and make them only when facilities could be obtained at lower unit costs outside incumbent's networks, CLECs made investments that proved to be profoundly uneconomic on massive scales. This forecloses any claim that CLECs would have invested more if UNEs were not available.

Moreover, the marketplace evidence also confirms the Commission's findings that UNEs are preconditions to investment. For example, the evidence demonstrates that AT&T's economic ability to serve low volume business customers through self-provisioned switches depends, among other key factors, on its ability initially to serve the customers through unbundled switching: *e.g.*, when AT&T serves customers initially through self-provisioned switches and moves then (where that is economically and technically feasible) on a "project" basis to self-provisioned switches. Beyond that, statistical evidence demonstrates that levels of AT&T local

investment are greatest in areas where UNEs are available at the most favorable terms. *See generally* Clarke Reply Dec.

As to incumbents' investment incentives, it would clearly defeat the Act's objectives if the Commission, in the face of impairment findings, exempted incumbents from unbundling obligations on the ground that they might cause incumbents to invest less. As the Supreme Court has held, the Act makes the creation of local competition an "end in itself" that is to be achieved by "reorganiz[ing]" the existing exchanges. *Verizon,* 122 S. Ct. at 1654, 1661. But here the statistical and other evidence foreclose any claim that unbundling has adverse effects on ILEC investment. It demonstrates that, if anything, the availability of UNEs fosters greater investment by incumbents, precisely because they understand that it will lead to broader and more effective facilities-based entry by CLECs. In this regard, AT&T's initial comments contained "multiple regression analyses" that establish these facts (*compare USTA,* 290 F.3d at 425), and AT&T's econometric experts have since run additional analyses using additional data that were not available at the time opening comments were filed, and the new analyses reach the same conclusions. *See* Willig Reply Dec. ¶¶ 94-102 & Technical Appendix.

Indeed, the Supreme Court's holding in *Verizon* quite plainly establishes that the statistical evidence that AT&T has collected is unnecessary to reject the incumbents' claims. Under *Verizon*, it is enough to note – as AT&T has – the "commonsense" propositions that (1) because unbundling leads to greater CLEC investment and brings about "some [facilities-based] competition, the incumbents will continue to have incentives to invest and to improve their services to hold to their existing customer base" (*Verizon*, 122 S. Ct. at 1676 n. 33) and (2) because TELRIC compensates incumbents for all risks they incur when they invest in innovation, the availability of UNEs cannot create legitimate disincentives for incumbents to

invest (*see id.* at 1676-79). Further, while *USTA* holds that claims of adverse effects on investment cannot be rejected based solely on evidence of ILEC investment that predated the *UNE Remand Order*, the Supreme Court further considered the evidence of CLEC and ILEC investment in the years since the *UNE Remand Order,* and concluded that it itself was sufficient to foreclose claims of adverse effects on investment. *See Verizon*, 122 S. Ct. at 1675-76.

Although contrary arguments are made in the opening comments of the incumbents and their suppliers and surrogates, the ILECs do not seriously dispute that unbundling generally has no adverse effects on incumbents' investments. Rather, their claims are targeted to ILEC investments that nominally only enable "broadband" services to be provided more widely over incumbents' networks. The incumbents and their allies argue that the Commission must or should exempt all "new" broadband-related investments in loop infrastructure from the Act's unbundling obligations.

However, this claim is wrong as a matter of law and baseless as a matter of fact. As explained in AT&T's initial comments (at 84-88), neither section 706 nor any other provision of the Act adopts a policy of promoting broadband investments that could require or permit the Commission to adopt exceptions to unbundling obligations when, as here, denials of access would impair CLECs' ability to provide service. *See* AT&T Comments at 84-88.

Nor is there any factual basis for the contrary claims. The incumbents and their allies assert – and have relied on "studies" that purport to show – that unbundling is preventing investments in (1) fiber and NGDLC upgrades (like Project Pronto) that allow DSL to be offered more widely and effectively and (2) fiber to the home ("FTTH"). But these assertions, and the studies underlying them, are shams. As to DSL, the ILECs have already made these investments because they are justified by cost savings in providing *narrowband* service whether or not DSL